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Customer No.: 31561
Docket No.: 12619-US-452
Application No.: 10/707,109

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed July, 05, 2006. Applicants submit that claims 1-11 are canceled; claims 12-31 are newly added. New claims 12~20 relate to "a wound type power generating element", which are fully supported by original claims 1 and 2. New claims 21-28 relate to "a stacked type power generating element", which are fully supported by original claims 1 and 3. New claims 13 and 22 are fully supported by original specification (paragraph [0017]). New claims 14-20 and 23-28 can be supported by claims 4-10. Therefore, the aforementioned amendments will not result in any new matter. Further, these amendments merely rewrite the claims in better forms, and thus will not limit the scope of the claims.

Discussion of Claims Rejections under 35 USC §102(e)

About "a stacked type power generating element"

Claims 1 and 3-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishida et al. (U.S. 2003/013190 A1).

Because the aforementioned rejection is related to "a stacked type power generating element", the applicant submit the following response to argue that claims 21-28 should be allowed.

(I) The Examiner states that the member 102 of Ishida et al (called member 102 in the following) is a core, however, the applicant argues that the member 102 is not a core and the reason is as follows.

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The object of this application is to have a core, even when certain external force is applied to the end of the lead protruding from the cell, with the lead being fixed on the core, the force is not transmitted to the connection part of the lead end and the electrode inside the cell; and consequently the electrode in the connection part is not broken.

For example, in Fig 4, when an external force is applied to the left end of lead (3), if the core (11) is not present, the connection part will be broken and the copper foil (20) also will be broken. And the aforementioned problems are already disclosed in the paragraph [0008] in the specification of this application.

In this application, because the core (11) is present for supporting the lead (3), the copper foil or aluminum foil will not be broken even in the aforementioned situation. To achieve the aforementioned objects and effects, the core as claimed has the functions of a core as understood by one skilled in the art. That is, as disclosed in the paragraph [0017] of original specification, it is preferable to hold rigidity to the extent of being able to serve as a core. And as disclosed in the paragraph [0020] of original specification, it is preferable to have a thickness with rigidity enough to be able to serve as a core.

However, as disclosed in the paragraph [0093] of Ishida et al., the member 102 of Ishida et al. is a metal sheet with thickness of 10 µm. Also Ishida et al discloses "a thin metal sheet is suitable for closely attaching the active material layer to form a flexible outer electrode plate". Thus, the member 102 of Ishida et al. is too thin to have enough rigidity and can't serve the function of core. Therefore, the member 102 of Ishida et al. is not comparable to the core of this application.

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According to the aforementioned discussion, because Ishida et al. fails to disclose the "core" with technical feature of this application, Ishida et al. fails to render claim 21 of this application anticipated, and the rejection of 35 U.S.C. 102(e) should be withdrawn.

Moreover, the applicant further stresses the rigidity of the core in claims 22, 31.

(II) Further, even the member 102 of Ishida et al. can be called a core according to Examiner, the applicant submits the following two arguments to support that the member 102 of Ishida et al. is not configured with the structure of a core defined in this application.

(a) Claim 21 of this application discloses "an insulative core"; in another words, the core is insulative. However, the Office asserts that another member 110b joined on the member 102 of Ishida et al. is insulative, rather than the member 102 is insulative. Therefore, the rejection to claim 21 base on the reason "the core is insulative at regions" is improper.

For the above reasons, Ishida et al. fails to disclose "an insulative core", and Ishida et al. fails to render claim 21 of this application anticipated.

(b) In claim 21, the positive electrode, the negative electrode, and the separator are stacked with insulative core. On the other hand, the insulative regions (110b) of Ishida is not stacked with the positive electrode, the negative electrode, and the separator. Therefore, Ishida et al. again fails to render claim 21 of this application anticipated.

(III) If claim 21 has novelty, the dependent claims 22-28 also have novelty.

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Discussion of Claims Rejections under 35 USC §103(a)

About "a wound type power generating element"

Claim 2 are rejected under 35 U.S.C. 103(a) as being anticipated by Ishida et al. in view of Gauthier et al. (U.S. Pat. 5,415,954).

Because the aforementioned rejection is related to "a wound type power generating element", the applicant submit the following response to argue that claims 12-20 should be allowed.

(i) According to the aforementioned discussions, the member 102 of Ishida et al. is not the core of this application.

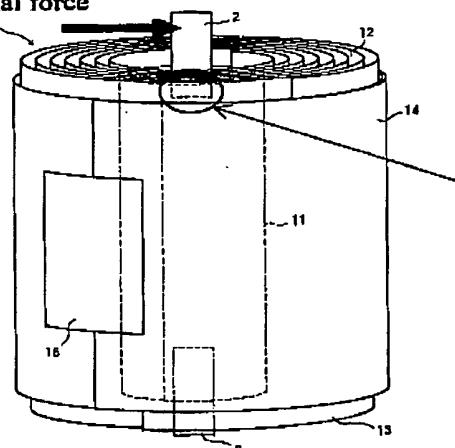
The object of this application is to have a core, even when certain external force is applied to the end of the lead protruding from the cell, with the lead being fixed on the core, the force is not transmitted to the connection part of the lead end and the electrode inside the cell; and consequently the electrode in the connection part is not broken.

For example, in the following figure, when an external force is applied to the top end of lead (2), if the core (11) is not present, the connection part will be broken and the aluminum foil (12) also will be broken. And the aforementioned problems are already disclosed in the paragraph [0008] in the specification of this application.

In this application, because the core (11) exists for supporting the lead (2), the aforementioned aluminum foil will not be broken even in the aforementioned situation.

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The external force



This portion is the connection part between the lead (2) and the electrode (12). The lead and the electrode are joined by ultra sonic wave welding. This portion will break by the external force if the core (11) doesn't exist.

To achieve the aforementioned objects and effects, the core as claimed has the functions of a core as understood by one skilled in the art. That is, as disclosed in the paragraph [0017] of original specification, it is preferable to hold rigidity to the extent of being able to serve as a core. And as disclosed in the paragraph [0020] of original specification, it is preferable to have a thickness with rigidity enough to be able to serve as a core.

However, as disclosed in the paragraph [0093] of Ishida et al., the member 102 of Ishida et al. is a metal sheet with thickness of 10 µm. Also Ishida et al discloses "A thin metal sheet is suitable for closely attaching the active material layer to form a flexible outer electrode plate". Thus, the member 102 of Ishida et al. is too thin to have enough rigidity

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and can not serve the function of core. Therefore, the member 102 of Ishida et al. is not the core of technical feature of this application.

According to the aforementioned discussion, because Ishida et al. fails to disclose the "core" of technical feature of this application the claim rejection under 35 U.S.C. 103(a) is improper and about the rejection to claim 12 is obvious should be withdrawn.

Moreover, the applicant further stresses the rigidity of the core in claims 13, 30.

(ii) Even the member 102 of Ishida et al. may be called a core according to the Office; the applicant still submits the following arguments to support that the member 102 of Ishida et al. does not configured with the structure of a core defined in this application.

In the Office Action, the Examiner states that the substitution between stacked configuration and wound configuration is obvious from the viewpoint of resultant compactness and ease of manufacture.

However, if the stacked configuration of Ishida et al. is substituted by a wound configuration, "a wound type power generating element that the member 102 (to be called a core) is disposed on the outside of cell" will be resulted. This is because the member 102 of Ishida et al. is disposed on the outmost position of stacked configuration (Please refer to the Fig.1, and "an outer jacket comprising metal sheets 102" disclosed in line 1 of paragraph [0083] of Ishida et al.).

The configuration of Ishida et al. is different from the configuration of claim 12 of this application. That is, the invention of claims 12-21 of this application can't be achieved

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through the aforementioned substitution. Further, Gauthier et al. fails to disclose, teach or suggest the motivation of disposing the member 102 of Ishida et al. on the center of cell.

Therefore, a person having ordinary skill in the art can't achieve the invention of claim 12 of this application by combining Ishida et al. and Gauthier et al. Accordingly, claim 12 of this application is nonobvious.

(iii) If claim 12 has nonobviousness, the dependent claims 22-28 are also nonobvious.

About the invention of fabricating method

In the office action, the novelty of original claim 11 (corresponding to the new claim 29) is rejected by Ishida et al. However, according to the aforementioned discussions, Ishida et al. fails to disclose or suggests the "core"; therefore Ishida fails to render claim 29 anticipated .

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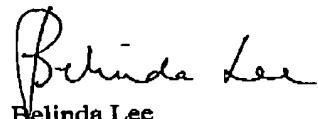
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CONCLUSION

For at least the foregoing reasons, it is believed that the new claims 12-31 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,

Date : Oct. 3, 2006



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